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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,466	10/17/2003	Rainer Bruns	CH-7973/LeA 36,310	3054
34947 7590 04/23/2007 LANXESS CORPORATION 111 RIDC PARK WEST DRIVE PITTSBURGH, PA 15275-1112			EXAMINER ARNOLD, ERNST V	
			ART UNIT	PAPER NUMBER
			1616	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/23/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/688,466	Applicant(s) BRUNS ET AL.	
	Examiner Ernst V. Arnold	Art Unit 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1 and 3-20 are pending. Claim 2 has been cancelled. Claims 11-20 are new.

Comment: In line 1 of claim 11, "trizoles" is a misspelling of triazoles.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1 and 5-20 remain/are rejected under 35 U.S.C. 102(a) as being anticipated by JP2003252705A (Applicant cited reference filed on 3/29/04).

The Examiner is relying upon and has supplied an English language translation of the Japanese publication for Applicant's benefit.

JP2003252705A discloses a composition containing a quaternary ammonium salt compound, a compound containing copper and a triazole compound [0004].

JP2003252705A discloses copper salts and copper oxide in the composition [0005].

JP2003252705A discloses ipconazole as the triazole and discloses that one or more of the triazoles can be used in the composition thus reading on instant claim 1 [0007].

JP2003252705A discloses treating wood, an article of matter containing industrial materials and a habitat for microorganisms, with the composition to assess preservation from decay effects and anti-protection thus reading on the instant process claims 5-8 and 10 ([0012]-[0024]). JP2003252705A discloses adding solvents to the composition

such as ethanol, an antimicrobial active compound, thus reading on instant claims 8 and 9 [0008]. JP2003252705A teaches the addition of solvents and additional auxiliaries such as the microbicide benzalkonium chloride and surfactants thus reading on instant claims 19 and 20 ([0008] - [0010]).

Response to arguments:

Applicant asserts that JP 2003252705A does not include at least one further active compound. The Examiner cannot agree. JP 2003252705A clearly discloses "two kinds or more" of the triazole compound can be used [0007].

Claim Rejections - 35 USC § 102

Claims 1 and 8 remain rejected under 35 U.S.C. 102(a) as being anticipated by Japanese publication number 2003095829 (Applicant cited reference filed on 3/29/04).

The Examiner is relying upon and has supplied an English language translation of the Japanese publication for Applicant's benefit.

JP2003095829 discloses an industrial antibacterial composition with a triazole first component, ipconazole, and at least one kind of compound selected from pyridine based compounds of sodium, zinc or copper and various solvents thus reading on instant claims 1 and 8 ([0006] and [0009]). JP2003095829 discloses that two or more of the active principle [0007]. JP2003095829 discloses the industrial materials include coatings, plastics, fiber and wood [0006].

Response to arguments:

Applicant asserts that JP 2003095829 does not recite at least one further fungicidally active compound as featured in claim 1. The Examiner cannot agree. JP 2003095829 clearly discloses ipconazole and a zinc salt as instantly claimed [0006].

Claim Rejections - 35 USC § 102

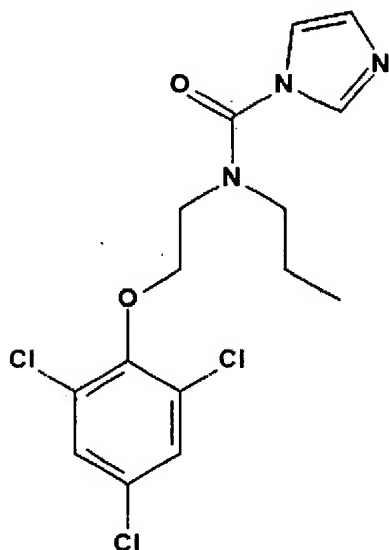
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 4, 8 and 9 remain/are rejected under 35 U.S.C. 102(b) as being anticipated by Tateishi et al. (EP0677246).

Tateishi et al. provide a fungicidal composition designed to target microorganisms having resistance to benzimidazole fungicides. The fungicidal composition of Tateishi et al. contains at least one fungicidal compound selected from the group consisting of benomyl, cypendazole, carbendazim, EBC, thiabendazole, fuberidazole, dimetbenzazol, thiophanate methyl and thiophanate with ipconazole thus meeting the limitations of instant claim 1 (See: Abstract and page 7, claim 1). Tateishi et al. disclose that the composition can be mixed with other fungicides to prevent pathogenic crop disease in a wider range (Page 4, lines 34-36). Tateishi et al. disclose that prochloraz (an imidazole type fungicide of instant claim 1) can be used in the composition (Page 4, line 37). The Examiner notes that the structure of prochloraz contains a substituted phenol.



Prochloraz

In addition, Tateishi et al. disclose other fungicides such as tachigaren (an oxazole), thiuram (a dithiocarbamate), kasugamycin (an aminoglycoside), captan (a phthalimide), probenazole (a benzisothiazole), triflumizole (an imidazole), pefurazoate (an imidazole), copper agents etc... (Page 4, lines 34-37). Tateishi et al. further disclose that the mixing ratio of ipconazole to the compound belonging to group B in a weight ratio preferably in the range of 1:0.1 to 1:100 which reads on instant claim 3 (Page 4, lines 12-13). In Example 3, Tateishi et al. prepare a suspension concentrate that contains ethylene glycol. Ethylene glycol has been regulated since 1988 as a pesticide as per the Federal Insecticide, Fungicide and Rodenticide Act therefore meeting the limitations of instant claims 4, 8 and 9 (See: reference U on the previous PTO-892).

Response to arguments:

Applicant asserts that Tateishi et al. does not disclose at least one further fungicidally active compound as recited in instant claim 1. The Examiner cannot agree. Probenazole is known as a benzothiazole or benzisothiozole as evidenced by the probenzole data sheet (See reference U on PTO-892). Thus, Tateishi et al. anticipate the combination of ipcanazole and a benzothiazole.

Claim Rejections - 35 USC § 102

Claims 1 and 8 remain rejected under 35 U.S.C. 102(b) as being anticipated by JP05221812A.

The Examiner is relying upon and has supplied an English language translation of the Japanese publication for Applicant's benefit.

JP05221812A discloses a composition containing ipconazole, a carbonate and a copper compound where the carbonate can be an ammonium carbonate and the copper compound can be a salt ([0004], [0005] and [0008]). JP05221812A discloses various additives that can be blended with the composition thus reading on instant claim 8 [0007].

Response to arguments:

Applicant asserts that JP 05221812A does not disclose ipconazole and at least one fungicidal compound as recited in claim 1. The Examiner cannot agree. JP 05221812A discloses ipconazole and ammonium carbonate, which is known for its use as a fungicide as evidenced by PAN pesticide database (See reference V on PTO-892).

Art Unit: 1616

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1 and 3-20 remain/are rejected under 35 U.S.C. 103(a) as being unpatentable over Tateishi et al. (EP0677246) in view of Arahira et al. (EP0341954) and JP2003252705A.

Applicant claims an active compound mixture comprising ipconazole and

b) at least one further fungicidally active compound selected from the group consisting of the ~~metal zinc~~ salts or ~~metal zinc~~ oxides, sulphamides, triazoles, dodecylmorph and its salts with arylsulphonic acids, benzothiazoles, isothiazolinones, thiocyanates, quaternary ammonium compounds and guanidines, iodine derivatives selected from the group consisting of diiodomethyl-p-tolyl sulphone and 3-iodo-2-propynyl-n-butylcarbamate, phenols selected from the group consisting of tribromophenol, 3-methyl-4-chlorophenol, 3, 5-dimethyl-4-chloro-phenol, dichlorophen, 2-benzyl-4-chlorophenol, triclosan, diclosan, hexachlorophen, p-hydroxybenzoic esters, o-phenylphenol, the alkali metal salts of said phenols and the alkaline earth metal salts of said phenols, pyridines, methoxyacrylates, quinolines, and imidazoles selected from the group consisting of clotrimazole, clotrimazole, imazalil, ketoconazole, prochloraz, and their metal salts and acid adducts.

Applicant claims a process of protecting industrial materials comprising applying thereto an active compound mixture.

Determination of the scope and content of the prior art

(MPEP 2141.01)

The reference of Tateishi et al. and JP2003252705A are discussed in detail above and that discussion is hereby incorporated by reference.

Ahahira et al. disclose the use of biocidal compositions that contain an azole derivative (for example, ipconazole) for preventing deterioration of industrial materials including paper, lumber, leather, paints, plastics, metals and inorganic materials and products formed by such materials (See: Abstract; page 2, lines 3, 29-33 42-43; page 3, lines 17-22 and claims 1-4, for example).

**Ascertainment of the difference between the prior art and the claims
(MPEP 2141.02)**

1. Tateishi et al. do not expressly disclose a composition/method comprising zinc salts or zinc oxides, sulphamides, triazoles, dodemorph and its salts with arylsulphonic acids, isothiazolinones, thiocyanates, quaternary ammonium compounds and guanidines, iodine derivatives selected from the group consisting of diiodomethyl-p-tolyl sulphone and 3-iodo-2-propynyl-n-butylcarbamate, phenols selected from the group consisting of tribromophenol, 3-methyl-4-chlorophenol, 3, 5-dimethyl-4-chloro-phenol, dichlorophen, 2-benzyl-4-chlorophenol, triclosan, diclosan, hexachlorophen, p-hydroxybenzoic esters, o-phenylphenol, the alkali metal salts of said phenols and the alkaline earth metal salts of said phenols, methoxyacrylates, quinolines, and imidazoles selected from the group consisting of clotrimazole, climbazole, imazalil, ketoconazole, and their metal salts and acid adducts.

2. Tateishi et al. do not expressly teach the use of applying the fungicidal composition to industrial materials including wood, woodbased materials, plastics, cooling lubricants and coating systems, such as paints, varnishes or plaster.

**Finding of prima facie obviousness
Rational and Motivation (MPEP 2142-2143)**

1. It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to add the various other known fungicides, such as triazoles including tebuconazole, for example, as suggested by JP 2003252705, to the composition/method of Tateishi et al. and produce the instant invention.

One of ordinary skill in the art would have been motivated to do this because the teachings of Tateishi et al. suggest the addition of other fungicides, which would be readily known to one of ordinary skill in the art (Page 4, lines 34-37). "It is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose.... [T]he idea of combining them flows logically from their having been individually taught in the prior art." In re Kerkhoven, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980). And JP 2003252705 teaches the combination of multiple triazoles.

2. It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the composition of Tateishi et al. to industrial materials including wood, woodbased materials, plastics, cooling lubricants and coating systems, such as paints, varnishes or plaster, as suggested by Ahahira et al., and produce the instant invention.

One of ordinary skill in the art would have been motivated to do this because the number of benzimidazole resistant microorganisms is growing and the composition of Tateishi et al. is effective against benzimidazole resistant microorganisms. By

Art Unit: 1616

increasing the lifetime of the industrial material, a beneficial cost savings is earned by decreasing the frequency of replacement of the material.

In the absence of any criticality/unexpected results, the presently claimed invention is considered *prima facie* obvious over the prior art for the reasons of record and those stated above.

A reference is good not only for what it teaches by direct anticipation but also for what one of ordinary skill in the art might reasonably infer from the teachings. (*In re Opprecht* 12 USPQ 2d 1235, 1236 (Fed Cir. 1989); *In re Bode* 193 USPQ 12 (CCPA) 1976).

In light of the forgoing discussion, the Examiner concludes that the subject matter defined by the instant claims would have been obvious within the meaning of 35 USC 103(a).

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Response to arguments:

Applicants assert that: 1) Tateishi fails to teach or suggest the instant combination of active compounds; and 2) there is no motivation to combine the references because the teachings of Tateishi are for use on living materials and the teachings of Arahira are directed toward industrial materials. The Examiner cannot

agree. First, as discussed above, Tateishi does teach the instant combination of active compounds. Secondly, there would be a reasonable expectation of success because both inventions are directed to killing microbes; they are fungicides. It doesn't matter where the microorganism is located and one of ordinary skill in the art would expect the active compound composition to be effective against the microorganisms in any locale.

Conclusion

No claims are allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

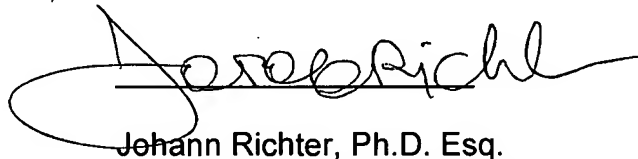
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernst V. Arnold whose telephone number is 571-272-8509. The examiner can normally be reached on M-F (6:15 am-3:45 pm).

Art Unit: 1616

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ernst Arnold
Patent Examiner
Technology Center 1600
Art Unit 1616

A handwritten signature in black ink, appearing to read "Johann Richter", with a large, stylized loop at the beginning.

Johann Richter, Ph.D. Esq.
Supervisory Patent Examiner
Technology Center 1600